

# Elimination of preventable blindness from diabetes by the year 2000

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*"Diabetes 2000" will parallel a major diabetic retinopathy public information campaign recently announced by the National Eye Institute. The NEI's National Eye Health Education Program (NEHEP), which targets both diabetic retinopathy and glaucoma, is fashioned along the lines of earlier federal initiatives against smoking and high blood pressure. By continuously updating our medical knowledge and skills related to this multisystem disorder, and by forging partnerships between physicians in the effective and efficient management of diabetic patients, we have a unique and important opportunity — we can reduce preventable blindness from diabetes by the year 2000.*

In no field of medicine is continuing medical education of physicians more critical than in the management of diabetes. Twelve million Americans have diabetes mellitus, and the disease knows no medical specialty boundaries. In addition to being a major cause of morbidity from multisystem complications, such as renal failure, neuropathy, and cardiovascular disease; diabetes is the leading cause of blindness among working-age Americans. It accounts for at least 12% of new cases of blindness every year in the United States. Diabetic retinopathy is often asymptomatic at its most treatable stage, emphasizing the importance of early diagnosis of this retinal complication. New information about diabetes emerges almost monthly as published in some specialty journal, making it mandatory to find better ways to "keep up" with advances in this field—the stakes are simply too high to do otherwise.

In response to the increasing importance of the overall problem of diabetes and diabetic retinopathy, and the availability of improved treatment regimens defined by published clinical trial results, the American Academy of Ophthalmol-

ogy (AAO) has embarked on a long-term education project designed to more rapidly translate research findings to medical benefits for the American public. The new project—"Elimination of Preventable Blindness from Diabetes by the Year 2000"—or "Diabetes 2000"—was announced at the AAO's 1989 Annual Meeting.

## Facts about diabetic retinopathy

The majority of diabetic patients have non-insulin-dependent diabetes mellitus (NIDDM, Type II). Usually diagnosed after age 40, Type II diabetic patients may or may not be treated with insulin. Much fewer patients have insulin-dependent diabetes mellitus (IDDM, Type I), which is usually diagnosed before age 30. Type I diabetics experience more frequent and severe ocular complications than do Type II diabetics. After 5 years, 23% of Type I diabetic patients have retinopathy; after 10 years, almost 60% have retinopathy; and after 15 years, 80% have it. Proliferative diabetic retinopathy (PDR)—the most threatening form of retinopathy—is present in 25% of Type I patients after 15 years and often remains asymptomatic well beyond the optimal stage for treatment.

An estimated 700,000 Americans have proliferative diabetic retinopathy and 500,000 have macular edema. The annual projected incidence of new cases of PDR and macular edema is 65,000 and 75,000, respectively. About 8,000 new cases of blindness a year in the United States are caused by complications of diabetes.

## What can be done

"Diabetes 2000" provides the means to close the gap between advances in research and changes in treatment patterns. While most physicians are aware of diabetic retinopathy, the AAO's goal now is to focus attention on the importance of early diagnosis and timely treatment of diabetic retinopathy based on the important advances of the last 5 to 10 years. For example, we now know that timely laser photocoagulation surgery can reduce the risk of visual loss from proliferative diabetic retinopathy by at least 50%. We know that timely laser photocoagulation surgery of diabetic macular edema can reduce the risk of moderate visual loss by 50%. We know that vitrectomy surgery can restore useful vision to some diabetic patients who have advanced diabetic retinopathy.

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Submitted: October 22, 1990

### The need for effective partnerships

As the working title implies, "Diabetes 2000" will be a long-term project aimed at a specific disease: Diabetic retinopathy and its complications. Several phases are anticipated.

Providing the latest research findings to ophthalmologists and other physicians who care for those patients is the first priority, followed by patient and public information. Initially, new advances and treatment guidelines for the medical and surgical treatment of diabetic eye disease will be emphasized through continuing education of ophthalmologists, other physicians, allied health professionals, residents, medical students and specialists in diabetes-related education.

In later phases, educational programs for diabetic patients and the public will be developed. Ultimately, improved eye care of diabetic patients is to be expected as a result of closer collaboration between the physician primarily responsible for the care of the patient's systemic illness, the patient and the ophthalmologist. Since diabetic patients can be asymptomatic despite significant progression of diabetic retinopathy, the importance of a renewed and improved partnership between the ophthalmologist and the patient's primary physician is critical.

Because of the ambitious goal and long time frame, many other medical organizations and public groups are involved in Diabetes 2000. Representatives from various medical specialties, government agencies, and other organizations devoted to problems of the diabetic patient have been invited to participate. Since diabetes is a complex, multisystem disease whose overall management is the responsibility of physicians other than ophthalmologists, "Diabetes 2000" will stress involvement of other physicians and medical specialty organizations in planning and implementing the project.

The importance of finding ways to develop effective part-

nerships between the patient's primary physician, the ophthalmologist and the patient in the management of diabetic eye disease is a major goal. Another important aspect of the project is the identification and promotion of existing diabetes eye health programs around the country, such as the Centers for Disease Control (CDC) Diabetes Translation Project. The AAO will encourage ophthalmologists to participate in national, regional and local programs already in operation, as sponsored by such organizations as the American Diabetes Association, the Juvenile Diabetes Foundation, Lions Clubs, and others.

### And in Hawaii

Hawaii ophthalmologists are participating. Educational materials are being developed and demonstration projects are underway in some states to encourage ophthalmologists and other physicians to participate in continuing education programs concerned with the overall management of diabetic retinopathy. A Preferred Practice Pattern on diabetic retinopathy is available through the offices of the American Academy of Ophthalmology (415-561-8500). This document provides the latest information concerning the management of diabetic retinopathy. The Hawaii Ophthalmological Society is actively involved in this national initiative and ophthalmologists in Hawaii are eager to help develop the necessary educational and service programs that will achieve this goal.

1. Kupfer, C: The challenge of transferring research results into patient care. *Ophthalmology* 96:737-738, 1989.
2. Preferred Practice Pattern: Diabetic Retinopathy, American Academy of Ophthalmology, 1989.

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